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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HESLIN ROTHENBERG FARLEY & MESITI P.C.
5 COLUMBIA CIRCLE
ALBANY, NY 12203

EXAMINER

VO, LILIAN

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/583,797

Applicant(s)

UCEDA-SOSA ET AL.

Examiner

Lilian Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 48 are pending.

Specification

2. The attempt to incorporate subject matter into this application by reference to U.S. Patent Application title is improper. Applicant needs to be updated with application serial number and/or patent number as appropriated.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1 – 10, 21 - 23, 34, 35, 36, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US 6,067,548) in view of Soltis et al (US 6,493,804, hereinafter Soltis).
5. Regarding **claim 1**, Cheng discloses a method of managing the resources of a data repository, said method comprising:

determining whether a relationship between one resource and another resource of a data repository is a containment-based relationship or whether the relationship is

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reference-based relationship (col. 3, line 51 – col. 4, line 1, 21 – 48: storing at least one member object corresponding to one of the objects in the enterprise – resources have a containment-based relationship, includes means for virtually linking the member object with a relationship definition (resources also have reference-base relationship) which can be dynamically evaluated and resolved at runtime in which access to the resources is determined by the relationship definition being a pre-determined appropriate value), wherein the data repository comprises a hierarchical structure of a plurality of resources; said hierarchical structure comprising one or more resources having a reference-based relationship and one or more resources having a containment-based relationship (figs 3 and 5, col. 6, lines 46 – 67, col. 8, lines 1 – 7, col. 10, line 52 – col. 11, line 3).

Cheng did not clearly disclose the limitation of locking the resource based on the determined relationship. Instead, Cheng discloses the concept of accessing the resources is determined by the relationship definition (col. 4, lines 21 – 35) and that resources relationship definition are being examined in order to perform users' requests (col. 4, lines 36 – 47). Cheng also discloses that authorization checking must be done when someone attempt to open and work on a resource (col. 13, lines 24 – 32). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to recognize to the authorization checking before accessing to the resource and the accessing to the resources based on the resources relationship definition implies that not only the resources have a security protection but also provide accessing to the resources based on the type of the relationship between the resources.

With respect to locking the resources, Soltis discloses the step of acquiring the locks that are controlled access and associated with the use of the storage block for

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exclusive use or for shared used by the acquiring client (abstract, col. 3, lines 41 – 46, col. 19, lines 15 – 28). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate the concept of locking the resources from Soltis to Cheng to exclude other users/clients from accessing/using the resources at the time so that data consistency can be maintained (Soltis: col. 3, lines 43 – 45).

6. Regarding **claim 2**, as modified Cheng discloses the locking of said at least one resource is performed without locking at least one other resource of said plurality of resources (Soltis: col. 3, lines 41 – 64 and col. 18, line 62 – col. 19, line 11).

7. Regarding **claim 3**, as modified Cheng discloses the locking of said at least one resource is further based on an operation to be performed (Soltis: abstract, col. 9, lines 42 – 65).

8. Regarding **claim 10**, as modified Cheng discloses the operation comprises at least one of create, delete, read and write (Soltis: col. 9, lines 42 – 65, col. 14, lines 33 – 55, col. 19, lines 15 – 34).

9. Regarding **claim 21**, as modified Cheng discloses the determining comprises employing a set of policies (Cheng: col. 4, lines 29 – 34: access to the resources is determined by the relationship definition being a pre-determined appropriate value. Col. 5, lines 58 - 61).

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10. Regarding **claim 22**, as modified Cheng discloses the resource comprises at least one of a table and a directory (Soltis: fig. 5).

11. **Claims 4 – 9, 23, 34, 35, 36, 47 and 48** are rejected on the same ground as stated in claims 1 – 3, 10, 21 and 22 above.

12. Claims 11 – 14, 24 – 27 and 37 – 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US 6,067,548) in view of Soltis (US 6,493,804) as applied to claims 1, 4 and 7 above, and further in view of Shaughnessy (US 5,555,388).

13. Regarding **claim 11**, as modified Cheng discloses the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig 5).

Although Cheng discloses the concept of creating an instance of the second object from the first object (Cheng: col. 12, lines 47 – 49) and Soltis discloses a client can obtain a lock of a storage block for shared or exclusive use (Soltis: abstract), as modified Cheng did not clearly specify the locking comprises write locking the first resource in order to create an instance of the second resource. Nevertheless, the concept of obtaining a write locking the first resource in order to create (copy, create or duplicate) an instance of the second resource is considered obvious and well-known in the art in which a write locking to the first resource must be obtained in order to create another instance of the resource. For example, a directory tree 520 in fig. 5, a write locking DIR1 (first resource)

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must be obtained in order to create an instance of either File1, File7, File8 and/or DIR3 (second resource) for their existence (Soltis: fig. 5). Furthermore, this concept can be found from Shaughnessy in which a write locking the first resource in order to create an instance the second resource (col. 10, lines 8 – 12: “Suppose, for example, a user is copying an Orders table. With a write lock in place, other users can concurrently view the table but cannot change the table structure or contents until the lock is lifted ...”. Col. 10, lines 25 - 28). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this concept to modified Cheng to prevent other users from changing the contents of a family of objects (Shaughnessy: col. 9, line 66 – col. 10, line 1).

14. Regarding **claim 12**, as modified Cheng discloses the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5), wherein the locking comprises write locking the first resource and the second resource in order to delete an instance of the second resource (Shaughnessy: col. 9, line 44 – col. 10, line 37).

15. Regarding **claim 13**, as modified Cheng discloses the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5), wherein the locking comprises read locking the second resource in order to read therefrom (Shaughnessy: col. 9, line 18 – col. 10, line 37 and col. 15, lines 42 - 44).

16. Regarding **claim 14**, as modified Cheng discloses the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5), wherein the locking comprises write locking the second resource in order to write thereto (Shaughnessy: col. 9, line 18 – col. 10, line 37).

17. **Claims 24 – 27 and 37 - 40** are rejected on the same ground as stated in claims 11 – 14 above.

18. Claims 15 – 20, 28 – 33 and 41 - 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US 6,067,548) in view of Soltis (US 6,493,804) as applied to claims 1, 4 and 7 above, and further in view of Annevelink (US 5,448,727).

19. Regarding **claim 15**, as modified Cheng discloses the relationship is a reference-based relationship (Cheng: figs 3 and 5, col. 6, lines 46 – 67, col. 8, lines 1 – 7, col. 10, line 52 – col. 11, line 3), wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5).

As modified Cheng did not clearly disclose the locking comprises write locking the first resource in order to delete the first resource. However the concept of obtaining the write lock to a resource before a delete operation can be performed on the resource is considered obvious and well known in the art. For example, a directory tree 520 in fig. 5,

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a write locking DIR1 (first resource) must be obtained in order to delete DIR1, and all the files/directories that it has referencing to (Soltis: fig. 5). Furthermore, this concept can be found from Annevelink in which she discloses the reference-based relationship (Annevelink: col. 18, table 4 and fig. 6) and write locking the object in order to delete the object (Annevelink: col. 12, lines 27 – lines 31, lines 42 - 63). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to modified Cheng to improve concurrency access to database.

20. Regarding **claim 16**, as modified Cheng discloses the relationship is a reference-based relationship (Cheng: figs 3 and 5, col. 6, lines 46 – 67, col. 8, lines 1 – 7, col. 10, line 52 – col. 11, line 3), wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5), wherein the locking comprises write locking the first resource in order to create an instance of the second resource (Annevelink: col. 18, table 4, fig. 6, col. 11, lines 36 – 52, col. 12, lines 27 – lines 31, lines 42 – 63, col. 13, lines 25 – 46).

21. Regarding **claim 17**, as modified Cheng discloses the relationship is a reference-based relationship (Cheng: figs 3 and 5, col. 6, lines 46 – 67, col. 8, lines 1 – 7, col. 10, line 52 – col. 11, line 3), wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5), wherein the locking comprises write locking the at least one instance of the first resource in order to delete the second resource (Annevelink: col. 18, table 4, fig. 6, col. 12, lines 27 – lines 31, lines 42 - 63).

22. Regarding **claim 18**, as modified Cheng discloses the relationship is a reference-based relationship (Cheng: figs 3 and 5, col. 6, lines 46 – 67, col. 8, lines 1 – 7, col. 10, line 52 – col. 11, line 3), wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5), wherein the locking comprises read locking the first resource and the second resource in order to read the second resource (Annevelink: col. 18, table 4, fig. 6, col. 12, lines 27 – lines 31, lines 42 - 63).

23. Regarding **claim 19**, as modified Cheng discloses the relationship is a reference-based relationship (Cheng: figs 3 and 5, col. 6, lines 46 – 67, col. 8, lines 1 – 7, col. 10, line 52 – col. 11, line 3), wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource (Soltis: fig. 5), wherein the locking comprises read locking the first and second resource and write locking the second resource in order to write to the second resource (Annevelink: col. 18, table 4, fig. 6, col. 12, lines 27 – lines 31, lines 42 - 63).

24. Regarding **claim 20**, as modified Cheng discloses the relationship is a reference-based relationship (Cheng: figs 3 and 5, col. 6, lines 46 – 67, col. 8, lines 1 – 7, col. 10, line 52 – col. 11, line 3), wherein the at least one resource comprises a first resource, a second resource and a third resource, the first resource and the second resource referencing the third resource (Soltis: fig. 5), wherein the locking comprises read locking the first and second resource and write locking the third resource in order to write the

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third resource (Annevelink: col. 18, table 4, fig. 6, col. 12, lines 27 – lines 31, lines 42 – 63).

25. **Claims 28 - 33 and 41 - 46** are rejected on the same ground as stated in claims 15 – 20 above.

Response to Arguments

26. Applicants' arguments with respect to claims 1, 4, 7 and 11 have been considered but are moot in view of the new ground(s) of rejection as set forth above.

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Xia (US 6,154,849), Breuker et al. (6,308,166 B1), McPartlan et al. (US Pat. App. Pub. 2003/0215083 A1), Du et al. (US 6,308,163 B1), and Smiley (US 6,263,341 B1) disclose the determining a relationship between resources.

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2127

lv
January 23, 2005


MENG-AI T. AN
SUPERVISOR PATENT EXAMINER
TECHNOLOGY CENTER 2100